REMARKS/ARGUMENTS

Claims 1-24, 33-38 and 48-52 are pending in the captioned application and are finally rejected. Reconsideration of this application in view of the above amendments is respectfully requested.

The claims stand rejected under 35 U.S.C. §112, first paragraph. Applicants respectfully disagree. However, in an effort to expedite prosecution, Applicants have amended the claims removing the claim language at issue. Therefore the 35 U.S.C. §112, first paragraph, rejection of the claims is now moot.

The claims stand rejected under 35 U.S.C. §102(b) as been anticipated by PCT Publication No. WO 90/05306 to Malmqvist et al. Applicants respectfully disagree.

Applicants first submit that the independent claims 1, 33 and 48 have been amended to specify that "each of said analytes is a member of a binding pair consisting of one ligand and one analyte". Support for this amendment can be found throughout the specification, especially on page 5, lines 6-9 and page 10, lines 19-22. Applicants submit that it is explicitly clear that the claimed method relates to the study of specific binding pairs, i.e., two participants of a ligand and an analyte in the reaction.

Applicants submit that Malmqvist et al. does not teach the claimed combination, i.e. immobilizing a set of different groups of ligands on different solid support surface areas, followed by sequential contact of the surface areas by a set of different groups of analytes to detect the interaction between analytes and ligands in

each group. In addition, Malmqvist et al. does not teach that at least about 75% of the analytes have substantially no cross-reactivity to other ligands than the one specific binding partner. Applicants submit that Malmqvist et al. clearly relates to the analysis of one macromolecule (whether it being ligand or analyte). Even if different epitopes are involved, they are still epitopes on one and the same macromolecule.

The Examiner states that Applicants' definition of analyte and ligand are broad, includes members of any specific binding pair and do not exclude macromolecules having groups of epitopes thereon that specifically bind different antibodies in groups of antibodies. However, Applicants submit that as stated earlier, the claims have been amended to specify that each analyte is a member of a binding pair consisting of one ligand and one analyte. Further, the claims state that at least 75% of the analytes have substantially no cross-reactivity to other ligands. As such, Applicants submit that the terms analyte and ligand are well defined and the claims do not include, or intend to include, the binding of an analyte with two ligands or vice versa.

The Examiner states that Malmqvist et al. teaches comparing binding of a plurality of different macromolecules (e.g., macromolecular mixtures, or macromolecules from different pathological conditions etc) with a plurality of different antibodies (monoclonal antibody mixtures or different polyclonal antibody population). However, the Examiner's assertion is not supported by the reference. In previous Office actions, the Examiner referenced pages 6-14 and 23 of Malmqvist et al. for support. Applicants respectfully assert that these sections are not related to the

claimed invention. Applicants submit that the paragraphs on page 14 refer to a method for identifying antibodies (ligands) against the various proteins. However, this method again screens the antibodies one at a time. There is nothing in the reference that teaches the claimed invention.

Applicants submit that the claimed methods expand the throughput and capacity of current sensor instruments by using mixtures of analytes and ligands in various settings. For example, mixtures of groups of ligands are immobilized in discrete areas (such as single spots) and mixtures of analytes can be sequentially contacted with these spots to gain data about the ligand-analyte interaction (Claim 1). This effectively reduces sample requirements and increases both speed of analysis and capability of existing sensor instruments. (Paragraph bridging pages 6 and 7.) Therefore, a large number of analyte-ligand pairs may be screened quickly and efficiently. Malmquist et al. does not teach or suggest this.

The distinguishing features discussed above in the context of independent claim 1 are also recited in independent claims 33 and 48 in the same or similar manner. Thus, none of the independent claims are anticipated by Malmqvist et al., nor can any of the dependent claims be anticipated since they contain all the limitations of the independent claims from which they depend.

Accordingly, Applicants submit that the pending claims are patentable over Malmqvist et al. and request that this ground of rejection be withdrawn.

Applicants respectfully assert that the claims are in allowable form and earnestly solicit the allowance of the claims 1-24, 33-38 and 48-52.

Early and favorable consideration is respectfully requested.

Respectfully submitted,

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